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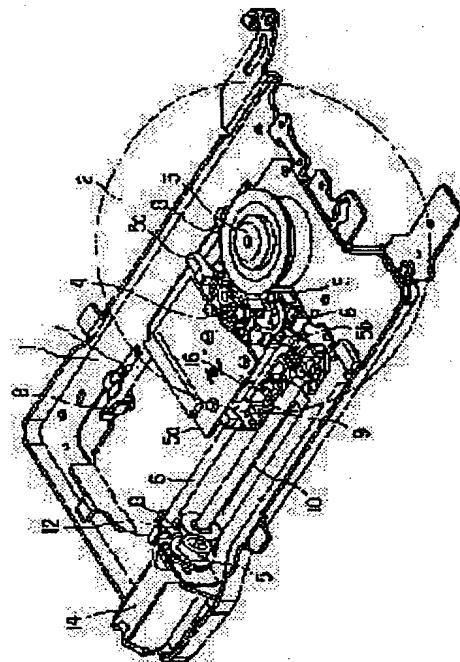
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(54) INFORMATION PROCESSOR

(57)Abstract:

PROBLEM TO BE SOLVED: To improve the heat radiation characteristics of a feed motor, and to reduce vibration during seeking.

SOLUTION: This information processor is provided with an optical head 4 movably provided on a chassis 1 to process information for an optical disk 2, a feed motor 14, a driving means for moving the optical head 4 along the optical disk 2 by the driving of the feed motor 14, a motor holder 21 for holding the feed motor 14 on the chassis 1, and a heat radiating sheet material 23 for transmitting heat radiated from the feed motor 14 to the chassis 1.



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CLAIMS

[Claim(s)]

[Claim 1] The information processor characterized by to provide an information-processing means it is prepared free [movement] on a chassis and process information to an information-storage medium, the driving means to which it has a drive motor and the aforementioned information-processing means is moved along with an information-storage medium by the drive of this drive motor, the attachment component which holds the aforementioned drive motor on the aforementioned chassis, and the heat-conduction member which conducts the heat emitted from the aforementioned drive motor on the aforementioned chassis.

[Claim 2] The information processor characterized by providing the following An information processing means for it to be prepared free [movement] on a chassis and to process information to an information-storage medium Driving means to which it has a drive motor and the aforementioned information processing means is moved along with an information-storage medium by the drive of this drive motor The attachment component which holds the aforementioned drive motor on the aforementioned chassis heat conduction which conducts the heat which intervenes between the aforementioned drive motor and the aforementioned chassis, and is emitted from the aforementioned drive motor on the aforementioned chassis — a member

[Claim 3] The information processor characterized by providing the following An information processing means for it to be prepared free [movement] on a chassis and to process information to an information-storage medium Driving means to which it has a drive motor and the aforementioned information processing means is moved along with an information-storage medium by the drive of this drive motor the 2nd page section which intersects perpendicularly with the 1st page section and this 1st page section — having — the aforementioned 1st page section — the end-face section of the aforementioned drive motor — attaching — this drive motor — the aforementioned chassis top — holding — the aforementioned 2nd page section — the lateral portion of the aforementioned drive motor — alienation — a maintenance means to contact the aforementioned chassis while countering heat conduction which conducts the heat which intervenes between the 2nd page section of this attachment component, and the lateral portion of a drive motor, and is emitted from the aforementioned drive motor on the aforementioned chassis — a member

[Claim 4] The aforementioned heat-conduction member is an information processor given in the claim 1 characterized by having the 1/2 or more length of the length of the shaft orientations of the aforementioned drive motor, or any 1 term of 3.

[Claim 5] The aforementioned heat-conduction member is an information processor given in the claim 1 characterized by being a web material made from silicon, or any 1 term of 3.

[Claim 6] The aforementioned drive motor is an information processor given in the claim 1 characterized by being a DC motor, or any 1 term of 3.

[Claim 7] The aforementioned maintenance means is an information processor given in the claim 1 which is sheet metal and is characterized by being fabricated in the shape of L character, or any 1 term of 3.

[Claim 8] The aforementioned maintenance means is an information processor given in the claim

1 characterized by being fabricated by dies casting in the shape of L character, or any 1 term of 3.

[Claim 9] The aforementioned maintenance means is an information processor given in the claim 1 characterized by being fabricated by the resin mould in the shape of L character, or any 1 term of 3.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001] [The technical field to which invention belongs] this invention relates to the information processor applied as an optical disk unit.

[0002]

[Description of the Prior Art] By having an optical head and moving this optical head along the direction of a path of an optical disk, this kind of information processor scans light to an optical disk, and processes information to it.

[0003] An optical head is moved by the rack and pinion method or the leading-screw method. Since the leading-screw method is excellent for the miniaturization of equipment, the leading-screw method is used widely.

[0004] A leading-screw method forms the connection implement which sends to an optical head and has a rack, and is meshing the delivery rack of this connection implement to the leading screw which cut the spiral. An optical head is moved along with a guide shaft through a delivery rack, when a leading screw rotates with a drive motor.

[0005] By the way, many DC motors are used as a drive motor of a leading screw. Especially, in the case of the leading-screw method, the so-called longwise motor with the length of the shaft orientations of a main part longer than the main part diameter of a DC motor is used well.

[0006] this drive motor -- the end-face section -- for example, it is held on the installation **

[0007]

[Problem(s) to be Solved by the Invention] However, in the former, in the case of a longwise drive motor, since the area of the end face is small, a touch area with a motor electrode holder becomes small, and the transmission efficiency of the heat which a drive motor generates becomes bad. Transfer of heat was bad when the motor electrode holder especially fabricated by sheet metal or the resin mould for cost reduction was used.

[0008] For improvement in the speed of the traverse speed of an optical head, i.e., seeking improvement in the speed, when the bur and the thermolysis property of a drive motor which enlarged the current passed to a drive motor were bad, the drive motor became an elevated temperature unusually and there was a problem of endurance getting worse.

[0009] Moreover, comparatively [with the long length], for the low reason, the drive motor itself vibrated [the rigidity of a motor electrode holder], according to the reaction of the movement of Rota of a drive motor at the time of seek operation etc., and the longwise motor also had the problem that generated noise or precise control became difficult.

[0010] Then, this invention aims at offering the information processor which enabled it to aim at improvement in the thermolysis property of a drive motor, and reduction of the vibration at the time of seeking.

[0011]

[Means for Solving the Problem] In order that this invention may solve the above-mentioned technical problem, a thing according to claim 1 is prepared free [movement] on a chassis, and an information-processing means process information to an information-storage medium, the

driving means to which it has a drive motor and the aforementioned information-processing means is moved along with an information-storage medium by the drive of this drive motor, the attachment component which hold the aforementioned drive motor on the aforementioned chassis, and the heat-conduction member which conduct the heat emitted from the aforementioned drive motor on the aforementioned chassis provide.

[0012] A thing according to claim 2 is prepared free [movement] on a chassis, it intervenes between an information-processing means process information to an information-storage medium, the driving means to which it has a drive motor and the aforementioned information-processing means is moved along with an information-storage medium by the drive of this drive motor, the attachment component which holds the aforementioned drive motor on the aforementioned chassis, and the aforementioned drive motor and the aforementioned chassis, and the heat-conduction member which conducts to the aforementioned chassis in the heat emitted from the aforementioned drive motor provides.

[0013] An information processing means for a thing according to claim 3 to be prepared free [movement] on a chassis, and to process information to an information-storage medium. The driving means to which it has a drive motor and the aforementioned information processing means is moved along with an information-storage medium by the drive of this drive motor. Have the 2nd page section which intersects perpendicularly with the 1st page section and this 1st page section, attach the end face section of the aforementioned drive motor in the aforementioned 1st page section, and this drive motor is held on the aforementioned chassis. the aforementioned 2nd page section -- the lateral portion of the aforementioned drive motor -- alienation -- it intervenes between a maintenance means to contact the aforementioned chassis while countereng. and the 2nd page section of this attachment component and the lateral portion of a drive motor, and the heat-conduction member which conducts the heat emitted from the aforementioned drive motor on the aforementioned chassis is provided

[0014] [Embodiments of the Invention] Hereafter, this invention is explained with reference to the gestalt of operation shown in a drawing.

[0015] Drawing 1 is the perspective diagram showing the information processing mechanism formed in the interior of the optical disk unit as an information processor.

[0016] One in drawing is a metal chassis and the spindle motor 3 which you equip [spindle motor] with the optical disk 2 as an information-storage medium, and makes it rotate is formed on this chassis 1. Moreover, on the chassis 1, the optical head 4 as an information processing means to process information to an optical disk 2 is formed. The optical head 4 is carried in the slider 5 which moves along the direction of a path of an optical disk 2. The both-sides section of a slider 5 is supported by the guide shafts 6 and 7 free [a slide] through -legs 5a, 5b, and 5c. The both ends of the guide shafts 6 and 7 are held through the stoppers 8 and 9 for a halt at the chassis 1.

[0017] As shown in the unilateral section of a slider 5 also at drawing 2 , it is located between leg 5a and 5b, the connection implement 16 is formed, and the slider 5 and the leading screw 10 are connected through this connection implement 16. A leading screw 10 is formed in parallel to the guide shaft 6, and the both ends are supported by the chassis 1 free [rotation] through supports 11 and 11. It sends to the end section of a leading screw 10, a gear 12 is attached, and the delivery motor 14 as a drive motor is connected to this delivery gear 12 through the drive gear 15. A DC motor is used as a delivery motor 14.

[0018] While a spindle motor 3 is loaded with an optical disk 2 at the time of information processing and an optical disk 2 rotates by the drive of a spindle motor 3, light is irradiated by the optical disk 2 from the optical head 4. Moreover, it sends at this time, a motor 14 drives, and a leading screw 10 rotates through the drive gear 15 and the delivery gear 12. By this rotation, the carriage 5 which carries the optical head 4 through the connection implement 16 moves along with the guide shafts 6 and 7. The light irradiated from the optical head 4 will be scanned along the direction of a path of an optical disk 2 by this, and processing of reading of information or writing will be performed.

[0019] Drawing 2 is the above-mentioned perspective diagram in which sending and showing a

motor 14, and drawing 3 is the front view.

[0020] The delivery motor 14 is the so-called longwise motor with the length of shaft orientations longer than the diameter, and is held on the chassis 1 by the motor electrode holder 21 as maintenance means.

[0021] The motor electrode holder 21 has bottom wall section 21b as the 2nd page section which intersects the shape of L character perpendicular with standing-up wall 21a as nothing and the 1st page section, and this standing-up wall 21a. The end-face section is attached in standing-up wall 21a of the motor electrode holder 21 by the screw bundle, and fixed maintenance of the delivery motor 14 is carried out.

[0022] It sends with bottom wall section 21b of the motor electrode holder 21, and the thermolysis web material 23 made from the silicon as a heat-conduction member intervenes between the base sections of a motor 14. The thermolysis web material 23 has 1/2 or more length l of length L of the shaft orientations of the delivery motor 14.

[0023] In addition, it may be fabricated by dies casting in the shape of L character, without being restricted to sheet metal as a motor electrode holder 21.

[0024] Moreover, the motor electrode holder 21 may be fabricated by the resin mould in the shape of L character.

[0025] Next, the thermolysis state at the time of the drive of the delivery motor 14 is explained.

[0026] If the delivery motor 14 drives, heat will occur, and it is transmitted to bottom wall section 21b of the motor electrode holder 21 through the thermolysis web material 23, and is emitted to a chassis 1 while this heat is transmitted as an arrow shows, and it is emitted to a chassis 1 through standing-up wall 21a of the motor electrode holder 21.

[0027] As described above, in order to emit the heat generated by the delivery motor 14 to a chassis 1 through the heat dissipation web material 23 of a large area, the heat dissipation property improved sharply and the temperature gradient of the delivery motor 14 and a chassis 1 was reduced by 2/3 or less as an actually applied effect.

[0028] In addition, in the former, since heat had got across to the chassis 1 only through standing-up wall 21a of the narrow cross section of the motor electrode holder 21, the heat dissipation property became bad.

[0029] Moreover, although vibration occurs at the time of the drive of the delivery motor 14, this vibration can be absorbed and decreased by the heat dissipation web material 23. Therefore, while being able to reduce the noise at the time of seeking, seeking precision can also improve.

[0030] In addition, when an oscillating absorption efficiency is taken into consideration, it is necessary to send length l of the heat dissipation web material 23, and to consider as the 1/2 or more length of length L of the shaft orientations of a motor 14.

[0031] Moreover, although it is necessary to send until it carries out the screw bundle of the delivery motor 14 to the motor electrode holder 21, and it is necessary to hold a motor 14 with a certain means, it becomes possible to send by the moderate adhesiveness of the heat dissipation nature web material 22, and to carry out temporary maintenance of the motor 14. Therefore, the time and effort which sends to a question to a screw bundle and continues holding a motor 14 and the motor electrode holder 21 can be saved, and assembly nature can also improve.

[0032] Drawing 4 shows the form of operation of the 2nd of this invention, comes out, and is a certain thing.

[0033] Although the case where sent using the above-mentioned motor electrode holder 21 which has bottom wall section 21b with the form of the 1st operation, and a motor 14 was held was explained, the form of the 2nd operation shows the case where sent using the motor electrode holder 31 without bottom wall section 21b, and a motor 14 is held.

[0034] That is, the heat dissipation web material 23 is made to intervene between the base section of the delivery motor 14, and a chassis 1 with the form of the 2nd operation.

[0035] The same operation effect as the form of the 1st operation described above also according to the form of this 2nd operation is acquired.

[0036] [Effect of the Invention] Since this invention was equipped with the heat-conduction member

which conducts on a chassis the heat emitted from a drive motor as explained above, it can transmit and emit generation of heat from a drive motor to a chassis promptly. Therefore, the temperature rise of a drive motor can be prevented and the effect that endurance can be improved is done so.

[0037] moreover, vibration generated at the time of the drive of a drive motor can be absorbed by the heat-conduction member, and noise can be reduced sharply — further — heat conduction — it can become possible to carry out temporary maintenance of the drive motor by adhesiveness with a moderate member, the time and effort which continues holding a drive motor in between to the screw bundle of a drive motor can be saved, and assembly nature can also improve

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The perspective diagram showing the internal configuration of the optical disk unit which is the form of 1 operation of this invention.

[Drawing 2] The perspective diagram which was held at the motor electrode holder and in which sending and showing a motor.

[Drawing 3] Front view which was held at the motor electrode holder and in which sending and showing a motor.

[Drawing 4] Front view showing the maintenance structure of the delivery motor which is the form of operation of the 2nd of this invention.

[Description of Notations]

- 1 — Chassis
- 2 — Optical disk (information-storage medium)
- 4 — Optical head (information processing means)
- 14 — Delivery motor (drive motor)
- 21 — Motor electrode holder (attachment component),
21a — Standing-up wall (the 1st page section)
21b — Bottom wall surface section (the 2nd page section)
- 23 — Thermolysis web material (heat-conduction member),
- 31 — Maintenance means,

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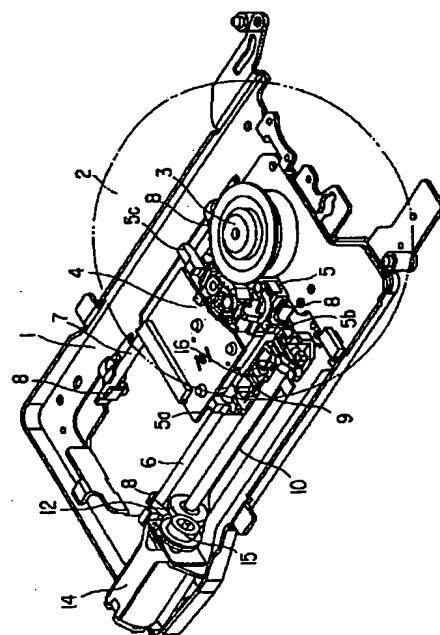
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(54)【発明の名称】 情報処理装置

(57)【要約】

【課題】 送りモータの放熱特性の向上と、シーク時の振動の低減を図ることができるようとする。

【解決手段】 シャーシ1上に移動自在に設けられ、光ディスク2に対し情報処理を施す光学ヘッド4と、送りモータ14を有し、この送りモータ14の駆動により光学ヘッド4を光ディスク2に沿って移動させる駆動手段と、送りモータ14をシャーシ1上に保持するモータホールダ21と、送りモータ14から放出される熱をシャーシ1に伝導する放熱シート材23とを具備する。



【特許請求の範囲】

【請求項1】 シャーシ上に移動自在に設けられ、情報記憶媒体に対し情報処理を施す情報処理手段と、駆動モータを有し、この駆動モータの駆動により前記情報処理手段を情報記憶媒体に沿って移動させる駆動手段と、前記駆動モータを前記シャーシ上に保持する保持部材と、前記駆動モータから放出される熱を前記シャーシに伝導する熱伝導部材と、を具備することを特徴とする情報処理装置。

【請求項2】 シャーシ上に移動自在に設けられ、情報記憶媒体に対し情報処理を施す情報処理手段と、駆動モータを有し、この駆動モータの駆動により前記情報処理手段を情報記憶媒体に沿って移動させる駆動手段と、前記駆動モータを前記シャーシ上に保持する保持部材と、前記駆動モータと前記シャーシとの間に介在され、前記駆動モータから放出される熱を前記シャーシに伝導する熱伝導部材と、を具備することを特徴とする情報処理装置。

【請求項3】 シャーシ上に移動自在に設けられ、情報記憶媒体に対し情報処理を施す情報処理手段と、駆動モータを有し、この駆動モータの駆動により前記情報処理手段を情報記憶媒体に沿って移動させる駆動手段と、第1面部とこの第1面部に直交する第2面部とを有し、前記第1面部に前記駆動モータの端面部を取り付けて該駆動モータを前記シャーシ上に保持し、前記第2面部を前記駆動モータの側面部に離間対向するとともに前記シャーシに接触する保持手段と、この保持部材の第2面部と駆動モータの側面部との間に介在され、前記駆動モータから放出する熱を前記シャーシに伝導する熱伝導部材と、を具備することを特徴とする情報処理装置。

【請求項4】 前記熱伝導部材は前記駆動モータの軸方向の長さの1/2以上の長さを有することを特徴とする請求項1乃至3の何れか一項に記載の情報処理装置。

【請求項5】 前記熱伝導部材はシリコン製のシート材であることを特徴とする請求項1乃至3の何れか一項に記載の情報処理装置。

【請求項6】 前記駆動モータはDCモータであることを特徴とする請求項1乃至3の何れか一項に記載の情報処理装置。

【請求項7】 前記保持手段は板金で、L字状に成形されることを特徴とする請求項1乃至3の何れか一項に記載の情報処理装置。

【請求項8】 前記保持手段はダイキャストによりL字状に成形されることを特徴とする請求項1乃至3の何れ

か一項に記載の情報処理装置。

【請求項9】 前記保持手段は樹脂モールドによりL字状に成形されることを特徴とする請求項1乃至3の何れか一項に記載の情報処理装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は例えば、光ディスク装置として適用される情報処理装置に関する。

【0002】

【従来の技術】この種の情報処理装置は光学ヘッドを備え、この光学ヘッドを光ディスクの径方向に沿って移動させることにより、光ディスクに光を走査して情報処理するようになっている。

【0003】光学ヘッドは例えば、ラックピニオン方式、或いはリードスクリュー方式により移動される。装置の小型化のためにはリードスクリュー方式が優れていることからリードスクリュー方式が広く用いられている。

【0004】リードスクリュー方式は光学ヘッドに送りラックを有する連結具を設け、この連結具の送りラックを螺旋を切ったリードスクリューに噛合させている。光学ヘッドは駆動モータによりリードスクリューが回転されることにより、送りラックを介してガイドシャフトに沿って移動される。

【0005】ところで、リードスクリューの駆動モータとしてはDCモータが多く用いられている。特に、リードスクリュー方式の場合、DCモータの本体直径よりも本体の軸方向の長さの方が長い、所謂、縦長モータが良く用いられている。

【0006】この駆動モータはその端面部が例えば、板金製のモータホルダに取り付けられてシャーシ上に保持されている。

【0007】

【発明が解決しようとする課題】しかしながら、従来においては、縦長の駆動モータの場合、その端面の面積が小さいため、モータホルダとの接触面積が小さくなり、駆動モータが発生する熱の伝達効率が悪くなる。特に、コスト低減のために板金や樹脂モールドで成形されたモータホルダを用いた場合には熱の伝達が悪かった。

【0008】光学ヘッドの移動速度の高速化、即ち、シーク高速化のためには、駆動モータに流す電流を大きくしたいが、駆動モータの放熱特性が悪いと駆動モータが異常に高温になり耐久性が悪化する等の問題があった。

【0009】また、縦長モータはその長さが長い割にはモータホルダの剛性が低いため、シーク動作時等に駆動モータのロータの動きの反作用によって駆動モータ自体が振動し、騒音を発生したり、精密な制御が難しくなったりするといった問題もあった。

【0010】そこで、本発明は駆動モータの放熱特性の向上と、シーク時の振動の低減を図ることができるよう

にした情報処理装置を提供することを目的とする。

【0011】

【課題を解決するための手段】本発明は上記課題を解決するため、請求項1記載のものは、シャーシ上に移動自在に設けられ、情報記憶媒体に対し情報処理を施す情報処理手段と、駆動モータを有し、この駆動モータの駆動により前記情報処理手段を情報記憶媒体に沿って移動させる駆動手段と、前記駆動モータを前記シャーシ上に保持する保持部材と、前記駆動モータから放出される熱を前記シャーシに伝導する熱伝導部材とを具備する。

【0012】請求項2記載のものは、シャーシ上に移動自在に設けられ、情報記憶媒体に対し情報処理を施す情報処理手段と、駆動モータを有し、この駆動モータの駆動により前記情報処理手段を情報記憶媒体に沿って移動させる駆動手段と、前記駆動モータを前記シャーシ上に保持する保持部材と、前記駆動モータと前記シャーシとの間に介在され、前記駆動モータから放出される熱を前記シャーシに伝導する熱伝導部材とを具備する。

【0013】請求項3記載のものは、シャーシ上に移動自在に設けられ、情報記憶媒体に対し情報処理を施す情報処理手段と、駆動モータを有し、この駆動モータの駆動により前記情報処理手段を情報記憶媒体に沿って移動させる駆動手段と、第1面部とこの第1面部に直交する第2面部とを有し、前記第1面部に前記駆動モータの端面部を取り付けて該駆動モータを前記シャーシ上に保持し、前記第2面部を前記駆動モータの側面部に離間対向するとともに前記シャーシに接触する保持手段と、この保持部材の第2面部と駆動モータの側面部との間に介在され、前記駆動モータから放出する熱を前記シャーシに伝導する熱伝導部材とを具備する。

【0014】

【発明の実施の形態】以下、本発明を図面に示す実施の形態を参照して説明する。

【0015】図1は情報処理装置としての光ディスク装置の内部に設けられる情報処理機構を示す斜視図である。

【0016】図中1は金属製のシャーシで、このシャーシ1上には情報記憶媒体としての光ディスク2を装着して回転させるスピンドルモータ3が設けられている。また、シャーシ1上には光ディスク2に対して情報処理を施す情報処理手段としての光学ヘッド4が設けられている。光学ヘッド4は光ディスク2の径方向に沿って移動するスライダ5に搭載されている。スライダ5の両側部は脚部5a, 5b, 5cを介してガイドシャフト6, 7にスライド自在に支持されている。ガイドシャフト6, 7の両端部は停止用のストップ8, 8を介してシャーシ1に保持されている。

【0017】スライダ5の一側部には図2にも示すように、脚部5a, 5b間に位置して連結具16が設けられ、この連結具16を介してスライダ5とリードスクリ

ュー10とが連結されている。リードスクリュー10はガイドシャフト6に対して平行に設けられ、その両端部は支持具11, 11を介してシャーシ1に回転自在に支持されている。リードスクリュー10の一端部には送りギヤ12が取り付けられ、この送りギヤ12には駆動ギヤ15を介して駆動モータとしての送りモータ14が接続されている。送りモータ14としてはDCモータが用いられる。

【0018】情報処理時にはスピンドルモータ3に光ディスク2が装填され、スピンドルモータ3の駆動により光ディスク2が回転されるとともに、光学ヘッド4から光ディスク2に光が照射される。また、このときには送りモータ14が駆動され、駆動ギヤ15及び送りギヤ12を介してリードスクリュー10が回転される。この回転により、連結具16を介して光学ヘッド4を搭載するキャリッジ5がガイドシャフト6, 7に沿って移動する。これにより、光学ヘッド4から照射された光が光ディスク2の径方向に沿って走査され情報の読み取りは書込等の処理が行われることになる。

【0019】図2は上記した送りモータ14を示す斜視図で、図3はその正面図である。

【0020】送りモータ14はその直径より軸方向の長さが長い所謂、縦長のモータで、保持手段としてのモータホルダ21によりシャーシ1上に保持されている。

【0021】モータホルダ21はL字状をなし、第1面部としての起立壁21aとこの起立壁21aに直交する第2面部としての底壁部21bを有する。送りモータ14はモータホルダ21の起立壁21aに端面部がネジ締めにより取り付けられて固定保持されている。

【0022】モータホルダ21の底壁部21bと送りモータ14の底面部との間には熱伝導部材としてのシリコン製の放熱シート材23が介在されている。放熱シート材23は送りモータ14の軸方向の長さLの1/2以上の長さlを有している。

【0023】なお、モータホルダ21としては板金に限られることなく、ダイキャストによりL字状に成形されるものであっても良い。

【0024】また、モータホルダ21は樹脂モールドによりL字状に成形されるものであっても良い。

【0025】次に、送りモータ14の駆動時における放熱状態について説明する。

【0026】送りモータ14が駆動すると熱が発生し、この熱は矢印で示すように伝達され、モータホルダ21の起立壁21aを介してシャーシ1に放出されるとともに、放熱シート材23を介してモータホルダ21の底壁部21bに伝達されてシャーシ1に放出される。

【0027】上記したように、送りモータ14で発生する熱を広い面積の放熱シート材23を介してシャーシ1に放出するため、放熱特性が大幅に向上し、実際に適用した効果としては、送りモータ14とシャーシ1との温

度差が2/3以下に低減された。

【0028】なお、従来においては、モータホルダ21の狭い断面積の起立壁21aのみを介してシャーシ1に熱が伝わっていたため、放熱特性が悪いものとなっていた。

【0029】また、送りモータ14の駆動時には振動が発生するが、この振動は放熱シート材23によって吸収して減衰することができる。従って、シーク時の騒音を低減できるとともに、シーク精度も向上できる。

【0030】なお、振動吸収効率を考慮した場合、放熱シート材23の長さ1を送りモータ14の軸方向の長さLの1/2以上の長さとする必要がある。

【0031】また、送りモータ14をモータホルダ21にネジ締めするまでは送りモータ14を何らかの手段で保持しておく必要があるが、放熱性シート材22の適度な粘着性により送りモータ14を仮保持することが可能となる。従って、ネジ締めまで間に送りモータ14とモータホルダ21を保持し続ける手間が省け、組立性も向上することができる。

【0032】図4は本発明の第2の実施の形態を示すであるものである。

【0033】上記した第1の実施の形態では底壁部21bを有するモータホルダ21を用いて送りモータ14を保持した場合について説明したが、第2の実施の形態では底壁部21bのないモータホルダ31を用いて送りモータ14を保持した場合について示すものである。

【0034】即ち、第2の実施の形態では、送りモータ14の底面部とシャーシ1との間に放熱シート材23を介在させている。

【0035】この第2の実施の形態によっても上記した第1の実施の形態と同様の作用効果が得られる。

【0036】

• 10 •

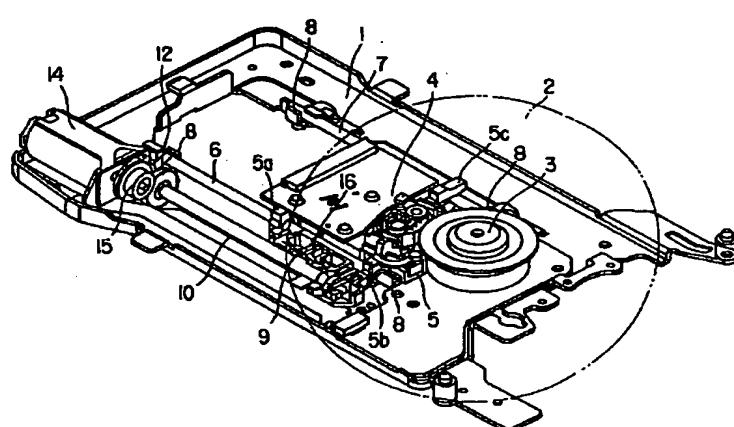
【発明の効果】本発明は以上説明したように、駆動モータから放出される熱をシャーシに伝導する熱伝導部材を備えたから、駆動モータからの発熱を速やかにシャーシに伝達して放出することができる。従って、駆動モータの温度上昇を防止でき、耐久性を向上できるという効果を奏する。

【図4】本発明の第2の実施の形態である送りモータの保持構造を示す正面図。

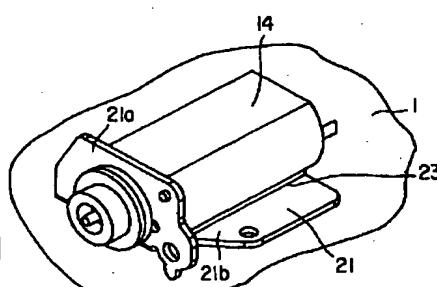
【符号の説明】

- 【音楽記憶部】
 1…シャーシ
 2…光ディスク（情報記憶媒体）
 4…光学ヘッド（情報処理手段）
 14…送りモータ（駆動モータ）
 21…モータホルダ（保持部材）、
 21a…起立壁（第1面部）
 21b…底壁面部（第2面部）
 23…放熱シート材（熱伝導部材）、
 31…保持手段、

1图1

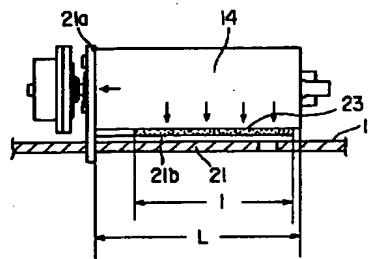


[圖2]



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【図3】



【図4】

